



# The BEACON

News from

## *The Coalition for Excellence in Science and Math Education*

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In this issue: CESE members have been busy - Message from the President - Dr. Eugenie Scott gives talk to CESE and New Mexicans for Science and Reason - A summary of the last two Board of Education Meetings - Do you really understand what standardized tests measure? - How much influence can we have on the public? - Blanchard does it again, and more.

### Message from the President

I could not help being impressed the past few weeks as CESE members have spread-out around the state to participate in a number of education endeavors. This was highlighted on January by the first meeting of the new State Board of Education, which now includes CESE members Marshall Berman and Christine Trujillo. I had the opportunity to speak with Christine yesterday regarding her first week in Santa Fe, and I was very impressed with how a number of serious issues were addressed by the entire Board. Marshall Berman presents a summary of the last two Board meetings in this issue.

There have been many activities within CESE that you may be interested in. Here is a sampling:

- **Partners Enhancing Science Education (PESC)**, the teacher learning program at Inez Elementary: Inez 4th-grade teacher Linda Charlton has taken the lead as project director, and has submitted a very strong proposal for program support through the Toyota TAPESTRY fund. The learning team is seeking the support because of the strong link between teacher content knowledge, teaching effectiveness, and student achievement. We're also looking at a few other possibilities to support the teacher team.

- **CESE members Marshall Berman (Past President), Christine Trujillo, and Pam Thomas** were elected to the State Board of Education (Marshall and Christine) and to the Los Lunas School Board (Pam). Congratulations to these individuals for the personal sacrifices they have made for the betterment of education, and good luck!

- **CESE vice-President Kim Johnson** delivered 2 weeks ago a lecture to the annual business meeting of The Albuquerque Astronomical Society (TAAS). In preparation for this, Kim wrote a Power Point briefing that is available on request for presentations about scientific fallacies of creationism.

- **Tom Manaster and Harry Murphy** staffed in January a CESE booth at the annual meeting of the Native American Education Coalition in Santa Fe. This is a great way to be visible in public and get out the word (we have a booth kit with CESE banner, brochures, etc.).

- **CESE Secretary Dave Thomas** spoke at the January monthly meeting of New Mexicans for Science and Reason, and provided strong evidence favoring evolution as well as a rebuttal of "Intelligent Design Theory."

- **CESE web-master David Beck** is currently updating our web site to provide new information to members and the science education community. Dave has invested a huge effort toward maintaining our site the past couple of years, and we owe him a huge thanks!

- **CESE member Les McFadden** has support through the Yale-New Haven Program to work this summer with 12 teachers to help them learn more about the earth sciences.

- **Science Fairs:** Yes indeed, it's time for science fairs! This is really one of the best ways that CESE can support science and math in our schools. You have the opportunity to meet parents, teachers, other judges, and best of all, the young scientists. Inez Elementary has their Science Expo from Feb 22-25, and I'm getting a trickle of other requests for judges. If you are interested, please contact the CESE Science Fair Coordinator, Harry Murphy, at 505 881-0519.

- **CESE BEACON:** The format of the Beacon is evolving, as you may have noticed. Feedback is welcomed.

- **CESE growth:** The CESE has many new members, ranging from small-business owners, to executives for major corporations, to internationally recognized scientists. Total membership has surpassed 450, and still climbing.

We have been very busy. If you see something you're interested in, or if you have any ideas for new undertakings, please get in touch.

Keep up the great work!

Cordially,

CESE President

The Beacon is published by the Coalition for Excellence in Science and Math Education (CESE) on a quarterly basis. CESE is a nonprofit corporation, incorporated in the State of New Mexico.

***The Coalition for Excellence in Science and Math Education (CESE) is composed of interested citizens throughout New Mexico and the nation, including scientists, engineers, educators, university faculty, members of the clergy, and parents. CESE is nonpartisan and non-sectarian, and welcomes members of all religions and political philosophies. This coalition works to improve science education and science literacy for all citizens. The organization also provides support to teachers, students, the public, and state officials who deal with education issues. We want to ensure that the beacon of the Enlightenment is not extinguished in 21<sup>st</sup> century America.***

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**Membership Information:** please contact any of the above officers. The only requirement for CESE membership is the acceptance of our mission, above, as a statement of the organization's purpose. The CESE annual dues are currently \$25 for an individual, \$35 for a family membership, and \$10 for students. This is to help defray costs of postage, insignia, envelopes, etc. No members will be asked to do anything more than they wish to do on behalf of the common cause. Please make checks payable to CESE and mail to 11617 Snowheights NE, Albuquerque, NM 87112.

**Dr. Eugenie Scott Presents Talk on Creationism and Evolution**

On Wednesday December 2, 1998 Dr. Eugenie Scott, Executive Director of the National Center for Science Education (NCSE) in Berkeley, California, spoke at a joint meeting of CESE and NMSR (New Mexicans for Science and Reason). Dr. Scott is one of the nation's foremost experts on creation/evolution issues. Dr. Scott's talk was entitled "Creationism and Evolution: Still Crazy After All These Years."

Highlights of her talk included a description of the frequently murky division between science and religion with regard to evolution and the erroneous belief, often promoted by creationists, that evolution is equivalent to atheism. She cited poll results which reveal some of the confusion surrounding peoples' perception of evolution. In particular, she cited a poll of over 1200 people where only 44% of respondents were interested in "evolution," while 80% were interested in the "history of life."

Dr. Scott also discussed what she described as the Creation/Evolution Continuum. On one side of the continuum lie the flat earthers who progressively give way to young earth creationists and finally to "creation scientists" such as Michael Behe. Some "creation scientists" accept many of the tenets of evolution and an old earth, but invoke intelligent design at an arbitrary point where they presume to have recognized so-called "irreducible complexity." The continuum then gives way to theistic evolutionists (God started it all and let it proceed on its own) and finally philosophical materialists who assign no intelligent direction.

Dr. Scott debated the teaching of creationism on PBS's Firing Line in December 1997 with several well known creationists. Bill Buckley headed the team arguing that creationism should be taught.

[After Dr. Scott's talk, a letter appeared in the Daily Lobo (the University of New Mexico's student newspaper) in which one of Albuquerque's own creationists took exception with Dr. Scott's lack of evidence to support evolution. This created a number of chuckles from the people who had seen her talk, since she was not attempting to present "evidence for evolution." Instead, she was discussing the background and definitions of creationism. It would seem that someone came to the lecture but failed to listen to the talk.]

**CESE Non-profit, Tax Exempt Status**

The CESE Tax Exempt paperwork has been filed with the IRS. We do not expect any formal determination until possibly November. It is difficult to predict exactly how long it will take because of the wide diversity experienced by applicants. In the meantime, please remember:

1. As an organization, we cannot endorse politicians or legislation.
2. As an organization we can provide information and analysis to the public on the effect of laws, rules, proposed legislation, etc., as long as it is apolitical.
3. We can provide testimony and research results to a public official (elected or otherwise), a legislative body, or to the executive branch **at their request**.
4. As individuals, we can participate in the political process. In fact, CESE urges you to do just that.
5. If you are interested in organized participation in the political process separate from CESE, you may contact Dr. Mark Bosolough at (505)-857-0794.

## Notes on School Board Meetings By Marshall Berman

### Meetings of the State Board of Education, October 7-9, 1998

Last October, I attended the State Board of Education (SBE) Instructional Services Committee (ISC) meeting. The State Department of Education (SDE) and the Instructional Materials Commission (IMC) chairmen presented the adoption list, and described the process. Board member Roger Lenard launched into a long monologue on the nature of science and his belief that the IMC process was flawed and needed improvement. He also staunchly defended the "text" of "Evolution: Key Non-Darwinian Events." He described this short piece (with accompanying floppy disk) as an excellent work, but still in draft form.

This "text" contains a small amount of esoteric material offered at \$49.95. I spoke as a reviewer and said that it was an unsalvageable effort filled with errors. This could be independently checked by having almost any scientist at any university read the text. It is subtly written, and presents material in three areas: Origin of Life, Origin of Metazoa, and Cyanobacteria. Most of the text is far beyond what could be expected of high school students. Much of the material looks like it was taken directly from other texts and from creationist books. Some of the basic material seems correct, but the questions reveal the author's true intent. For example,

"15. Explain the concept of Occom's (sic) Razor with regard to intelligent design."

"16. Explain how the Null hypothesis and intelligent design follow the scientific method."

Mr. Lenard said that he actually had not read it and that maybe it was not accurate. The IS Committee ultimately recommended that the "Non-Darwinian" text be adopted and that a minority report should be a future IMC action.

The next topic was science performance standards. One item was raised: "Content Standard 4, E2 - Describe the general idea of evolution as: a series of more or less gradual changes that account for the present form and function of objects, organisms, and natural and artificial systems, and the present arising from material and forms of the past." The Board itself had written and unanimously voted for this wording. Toni Nolan-Trujillo said the SDE's recommendation was to keep the wording. Mr. Lenard said that he only wanted consistency with the other standards. He suggested that the initial wording be changed to "Discuss the evidence for and against the general idea ...." It passed! He then suggested that this was too minor to even bring to the attention of the full Board!

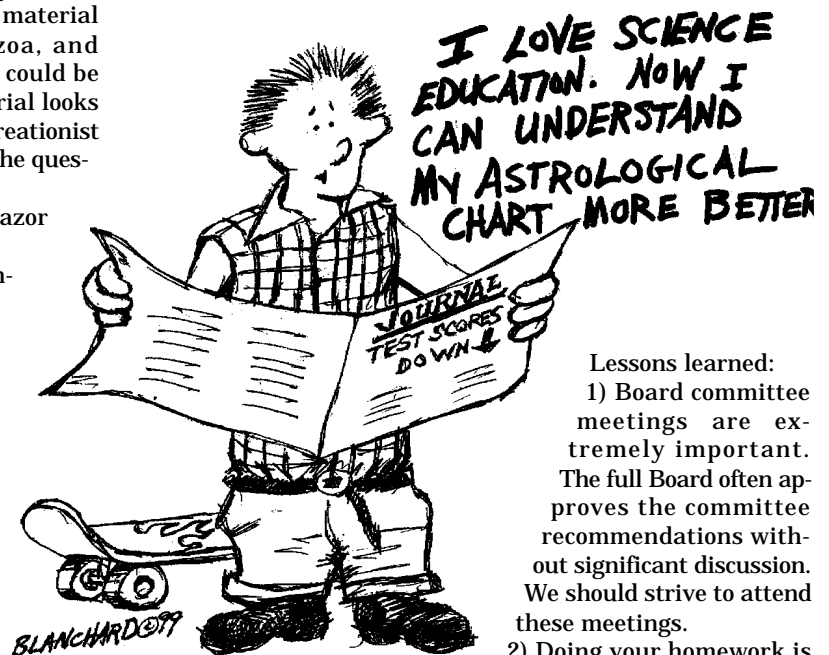
Fourteen Board members were present on October 9. It was an excellent meeting. Many members of the Board are highly intelligent, articulate, and knowledgeable about education issues. A very diverse task force had reached consensus on proposed new legislation for Charter schools. The questions and answers showed good research, data, and intentions.

The SDE and the Instructional Materials Commission (IMC) presented their results to the full Board. Mr. Lenard presented the Committee's vote to accept the IMC recommendations but with the removal of "Evolution: Key Non-Darwinian Events in the History of Life" from the Do Not Adopt List. Confusing

amendments were then proposed. President Lynn Medlin suggested that the Board simply vote on accepting the Committee's recommendation. If rejected, then vote on accepting the IMC recommendations in toto, and then consider additional amendments if required.

Discussion included another monologue on science from Mr. Lenard, and a stinging and poignant rejection of creationism and the "Non-Darwinian" text by Steven Schmidt. CESE member Marilyn Savitt-Kring also spoke from the audience. The vote was 12 to 2 to reject the IM Board amendment!!! Only Mr. Lenard and Ms. Pogna voted for it! The Board then voted on the original IMC recommendations. They were completely accepted by a vote of 11 to 3.

Mr. Lenard then attempted to reintroduce his amendment concerning changing the IMC process. Mr. Medlin and several others said this was inappropriate for the Board at this time and it was referred back to the IS Committee. All IMC recommendations were adopted and the minority report is gone for this year.



Lessons learned:

- 1) Board committee meetings are extremely important. The full Board often approves the committee recommendations without significant discussion. We should strive to attend these meetings.
- 2) Doing your homework is vital. Disingenuous statements can be rendered ineffective by facts.

- 3) Personal conversations with Board members are very helpful, especially when accompanied by facts.

### Meetings of the State Board of Education, January 19-22, 1999

On January 19, the newly elected and appointed members of the SBE met for an orientation. Committee assignments were based on the previous members' assignments. My predecessor, Millie Pogna, only attended the Instructional Services Committee, so that will be my only assignment until April, when I can select additional committees. Current SBE procedures prevent members from attending other committees if more than 7 members are present. This will be reconsidered later by an ad hoc committee.

On Wednesday, I attended the ad hoc committee on changing SBE rules to allow attendance of any committee meeting by a non-voting Board member. We agreed to bring the matter up to the full Board for consideration.

The Instructional Services Committee discussed the shortage of Commissioners for the upcoming cycle for math, music and art. Applications will be available on the web, and I have paper and electronic copies. The next standards will be on social studies, including civics, geography, history, and psychology.

On Thursday, all the new Board members were sworn in by Supreme Court Justice Petra Jimenez Maes. I signed the oath and wrote a check for \$3. The SBE recognized Rhodes Scholar, Manuel Montoya, from Mora High School. We also honored the Northern New Mexico US Robotic BEAM (biology, electronics, aesthetics and mechanics) team. These 17 students won many awards in the International BEAM Robotic Games and QUANTA Science Games in Lucknow, India.

Governor Johnson was scheduled to appear before the Board for thirty minutes. He actually stayed an hour, outlining his program. Eleanor Ortiz explained that the SBE shared almost all of Johnson's recommendations except for a few, and that we needed to work together to make improvements. Most of the speakers requested a continuing dialogue with the governor, and expressed their appreciation for his personal appearance.

The 1998-99 unit value (cost per student) increased 7.8% over the 1997-98 value from \$2175 to \$2344. However, the APS district increase was only 6%.

As part of the SBE's accountability actions, 11 schools have been designated as in need of improvement based on low test scores for 3 consecutive years: Emerson and Eugene Field Elementary in Albuquerque; Santo Domingo Elementary and Mid-School in Bernalillo; Newcomb Elementary in Central;

Cuba Middle in Cuba; Sunland Elementary in Gadsden; Church Rock Elementary in Gallup; Coronado High in Jemez Mtn; Costilla Elementary in Questa; W. Las Vegas High in W. Las Vegas, and Zuni High in Zuni. About 65 schools are known to be on a list of poor performers. The SBE has an 11-step plan for improving these schools, with the ultimate possibility of serious consequences. I think this is a very good approach, especially since the SDE and SBE will try to improve performance at these schools before taking more serious actions. It is especially

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important to take into consideration the composition of the student body at these schools in terms of poverty, language problems, frequent turnover, and often-difficult family situations.

The State Board is developing a Strategic Plan. A subcommittee (Catherine Smith, Flora Sanchez, Peggy Davis Eleanor Ortiz, and I) worked on a revised draft. This was presented to the full Board and adopted unanimously. I can provide a copy of the plan vision, mission, values and strategic issues.

The SBE and SDE are taking credit for the high rankings that NM standards received from the AFT and Quality Counts (Education Week gave NM an A). The CESE is very interested in improving the NM science standards, despite these generic

ratings. Therefore, please keep me apprised of any incidents in the state where the teaching of evolution, astronomy, geology, or any other modern science is negatively impacted by the existing science standards.

Many other items were discussed, but I won't bore you with the details. I was very impressed by the performance of the new Board members: CESE member Christine Trujillo, Frances Stevens, Jim Barrett, Patricia Kelliher, John Darden, Peggy Davis, and Teresa Davis-McKee.

I am optimistic about the prospects for future Board actions. However, I need to be kept informed by you.

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## **Tom Manaster Pushes for Correspondence Course Credits for High School**

Through the efforts of State Department of Education staff and CESE Board member Tom Manaster, correspondence course regulations for K-12 schools in New Mexico have been updated. Among changes, the new state regulations now allow credit toward graduation for completed correspondence courses if such courses are approved locally and are accredited in the state education board in the state where the courses originate. The regulations offer new flexibility to schools (in particular rural schools) that do not have the resources to teach courses such as advanced sciences. The State Board of Education approved the new regulations in their October meeting.

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## **Media Influence on the General Public: A Case Study**

**By Steve Getty**

In this New Year, the CESE and advocates of science and math education in New Mexico will face a very different State Board of Education (SBE) and new battles over education policy in the current legislative session. With a sense of anticipation, we wonder what substantive decisions and accomplishments will really lead to future improvements. I'd like to share some of my thoughts about understanding better the complex relations among education policy, our governing bodies, the media, and public perceptions.

The public receives much of its information on education from the media, and I have been trying to think of a way to evaluate quantitatively how much the media can shape public perceptions of such issues. "Sure the media can," one might say, but once again, is there a way to measure by how much? This is germane to the current legislative session in which several different education bills are on the table.

I would argue that for issues that the Albuquerque public does not have an opinion about – one way or another – our two local papers (Journal, Tribune) can swing perceptions up to about 11-12%. I have been told that in a political race, for example, the papers' endorsement is worth about 1-2%. However, there is no way to measure this other than through a huge, well selected voter exit poll, so as to reduce uncertainties to a level to see that the 1-2% is real.

Why is this question important for education policy? Say, for example, that legislators wished to introduce competition into the education system by a "voucher" plan (meant in the most

general sense). The public probably already holds pointed views on this topic, and thus, simple media reporting would be less likely to shift opinions substantially. Moreover, because the public is predisposed, it is difficult to design an experiment to test how the media shapes perceptions of the issue. In contrast, introducing competition in education by charter schools is less an emotional issue, the public is less likely to have strong biases, and paper presentation could have a greater impact upon public opinion. So then, what is a low-bias issue where we can measure a response to the newspaper presentation?

Here is what I did: I assumed that on average, the public does not really know who the Metro Court Judges are, and it does not have any good reason to vote for, or against, any particular judge. This is true for me, and virtually everyone with whom I have casually checked regarding casting votes for metro judge retention. My sampling may be biased, but I only found one person who had an opinion about only ONE of the 11 metro judges up for retention last November. I used the vote for metro court judge retention because political party bias is too large a variable in a partisan race to be able to assess how the newspapers influence the public.

Thus, each judge's name is effectively one independent sampling, and there were 11 samplings to test for a correlation of whether or not voters used the paper endorsements (Journal and Tribune had same endorsements). If there's a correlation, the difference tells quantitatively about the importance of the endorsement.

In the table below, 7 judges received endorsements of "yes" to retain them from Journal and Tribune, while 4 judges received "no." For all judges, there were an average of 126,802 votes cast per judge (from the N.M. Secretary of State web page, Bernalillo Co.), and there's an exact correlation between the papers' endorsement and percentage of voters supporting retention of that judge. According to Walt Murfin, CESE's statistician, the probability of this occurring by chance is on the order of 1-2 in 100,000. One could generalize that for the "no

JUDGE	% YES VOTES	% NO VOTES
<i>Paper Endorsed "YES"</i>		
Brown	75.55	24.45
Kennedy	74.39	25.61
Candelaria	74.36	25.64
Grant	74.65	25.35
Baca	71.62	28.38
Kavanaugh	75.34	24.66
Gomez	72.31	27.69
AVERAGE YES = 74.0%		
<i>Paper Endorsed "NO"</i>		
Martinez	63.61	36.39
Barnhart	62.91	37.09
Ashanti	58.14	41.86
Gentry	65.73	34.27
AVERAGE YES = 62.6%		

public predisposition" end-member, the papers sway 11-12% of the voting public.

Regardless of some glowing "YES" Journal and Tribune endorsements, an average of about 26.0% of 127,000 voters in Albuquerque said "NO," do not retain any of the judges. I can see a protest vote aimed against a candidate, or pool of candidates in a race, but are these 33,000 voters protesting the city judicial system? Do they have a better plan? What do they really think will happen if we toss each judge? Or, are about 5 in 20 people irrationally angry about parking tickets? Whatever the explanation, they do appear to form a very stable core group.

What does this have to do with CESE? I'm glad you asked. For those topics dealing with science and math education which are unfamiliar to the general public, it is very important for the CESE to provide accurate information. The information must also be framed properly. Remember, we have the potential to influence a substantial number of people based on the above analysis. Thus, the CESE will continue to focus on being an important educational resource by being involved in activities such as teacher professional development, staffing booths at educational conferences, giving talks on educational topics, and providing science fair judges. These are all things that CESE is currently doing.

## Do You Really Understand What Standardized Tests Are?

By Cindy Chapman and Judy Taylor

Schools are frequently judged by their students' performance on tests. Test scores are routinely reported in the media and quoted by columnists, politicians, foundations, educators, and real estate agents. However, many people do not really understand how these tests work nor what the scores mean.

The two types of standardized tests most frequently used by states and/or school districts are norm-referenced and criterion-referenced tests. Norm-referenced tests compare students to other students and rank them against each other. Criterion-referenced tests tell us whether students have mastered a particular body of knowledge or skill. The Terra Nova test currently administered to New Mexico's 4th and 8th graders is primarily a norm-referenced test. A small part was created specifically to test students against some of the new state standards. This is an example of a criterion-referenced test

*Cindy Chapman is our own, award winning teacher and CESE Board member. She is a 1995 Presidential Awardee for Excellence in Mathematics Teaching, elementary level. Judy Taylor is a Nationally Board Certified Teacher and a finalist for the 1998 New Mexico Presidential Award for Excellence in Mathematics Teaching, elementary level. Both teach 2nd grade at Inez Elementary School.*

Before a norm-referenced test is published, it must be shown to produce predictable results (specifically a bell curve) when given to a large population representative of a cross section of the general population. This is called the norm group.

Any time a norm-referenced test is given to a large population the results will be expected to fall along the bell curve.

When other students take this test, their scores are compared to the results of the norm group. These results are then re-

ported as percentile scores. When reading norm-referenced test results, people confuse percentile and percentage. For example, a test score of 60% means that a student got 60% of the items correct. A test score in the 60th percentile means that a student scored better than 60% of the other students taking the test. A score in the 60th percentile is a desirable score, whereas a 60% on a test would be just above failing.

Another confusion with understanding the scores in norm-referenced tests lies in the relationship between percentile scores and the bell curve. While the raw scores will fall along a bell curve, each percentile score represents an equal number of test takers – one percent of the test takers fall within each percentile. This means that a difference of raw score of 1 may result in a percentile difference of several points. When comparing two students it may only be the one test item that separates their percentile ranking by several points.

Perhaps the most widespread misunderstanding about norm-referenced tests is that it is possible for a large segment of the student population to significantly improve test scores. The test-makers monitor the test scores over the years and as test scores begin to cluster above the 50th percentile, the test-makers re-normalize the test so that again, one percent of the test takers will fall within each percentile. Therefore, the notion that large districts (large enough to represent a cross-section of the population such as the state of New Mexico or the Albuquerque Public Schools)

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can dramatically increase their test scores is just that, a notion. A small population, such as a single school or a very small district (small enough so that they do not represent a cross-section of the population) could increase their test scores without the test-makers needing to re-normalize.

It is important for us to understand that norm-referenced standardized tests do not give us information on what individual students or schools have achieved in terms of knowledge. They only tell us rankings of test takers compared to a cross-section of the national school population. If this relative ranking goes up for a given school from one year to the next, it could be because the national average went down. If we want to know whether students have achieved certain skills or bodies of knowledge, we need to look at criterion-referenced tests.

Criterion-referenced tests measure student performance against specific standards. Here we can determine whether students or schools or school districts have met learning goals. For example, a criterion-referenced test can tell us whether students in 5th grade have learned the proper uses of capital letters. Scores needn't fall along a bell curve, and all of the students taking the test could receive a perfect score on the items testing for capital letters.

Criterion-referenced tests provide an absolute measurement as opposed to a relative measurement. It is possible for 100%

of the test takers to be successful on these tests or for 100% to fail. Students' scores would be determined by how many they got right, not by how many they got right compared to how many other people got right. Scores are compared to pre-established requirements for mastery (often called benchmarks).

When we read of large populations of students with significant test score increases, it usually will pertain to criterion-referenced test, as in the case of the Ysleta School District in Texas.

For test scores to be truly useful to us, we need to understand what they represent. We need to keep in mind that tests are only one measure of student performance.

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## **Science Literacy and the Debut in New Mexico of "California Red Superworms"** **Compiled by Steve Getty**

Science literacy certainly cannot guard against all evils. However, just thinking for a few minutes, plus perhaps a little basic biology and physics understanding, might have helped some New Mexicans realize this: the gastrointestinal tracts of worms cannot house the high-energy nuclear reactions required to transform the by-products of the nuclear industry. After all, if it was so easy to rid ourselves of radioactive waste, why would Waste Isolation Pilot Plant (WIPP) be such a big deal?!

For the past few months, the Albuquerque Journal has been following a slimy story, with headlines such as, "JURY INDICTS ALLEGED 'SUPERWORM' SELLER." As reported in the Albuquerque Journal (6/13/98) from Aztec, New Mexico, "A Farmington man has pleaded no contest to fraud charges after being accused of bilking people out of thousands of dollars by selling "California Red Superworms" he claimed ate nuclear waste. Thomas Stanley Huntington, 52, entered his pleas this week to one count of third-degree fraud, five counts of fourth-degree fraud and one count of issuing a worthless check, fourth-degree felony. Six other counts of fraud and one count each of embezzlement and racketeering were dismissed as part of a plea agreement."

One Journal report continues, "Huntington was accused of bilking at least a dozen people out of \$15,000 by selling them worms he said would be resold to the federal government's as-yet-unopened nuclear waste repository near Carlsbad. Court records say Huntington sold the worms at 4 pounds for \$500. He allegedly told would-be worm entrepreneurs they could use worms purchased from him as breeding stock, raise more worms, then "make big money" selling them back to him for the Waste Isolation Pilot Plant. WIPP officials told investigators they had no contract with Huntington. "Easiest job ever!!!" read a worm enterprise brochure released by the state Attorney General's Office. The Attorney General's Office filed a civil complaint against Huntington earlier in the year along with a temporary restraining order to stop him from selling more worms.)

<p><i>SUPERWORMS + RADIOACTIVE WASTE</i></p> <p>=</p> <p><i>NO WIPP?</i></p>
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## Photo Page



*Does the presence of this trilobite in a relatively new overpass abutment indicate that the Earth is only a few years old?*

Trilobite by Wallace and photo by Free



*The first person to figure out what this is wins five bucks off their dues.*

### **Dr. Eugenie Scott (NCSE) Speaks to a Joint Session of CESE and New Mexicans for Science and Reason.**



*Dr. Scott (center) with Ken Frazier, Tom Manister, John Geohegan, and Jerry Shelton behind John (R-L). Photo by David A. Thomas*

**Please send any interesting pictures you either take or come across to:**

**Kim Johnson  
9906 Loretta NW  
Albuquerque, NM 87114**

**The pictures should be topical regarding science and math education or CESE activities in general. If you need the pictures back, please enclose a note to that effect. Humor is greatly appreciated.**

**Perhaps some of the people can be fooled all of the time and all of the people can be fooled some of the time., but a good dose of the scientific method along with a little skepticism can keep you from being fooled a heck of a lot more often than the other guy.  
*Anonymous***

Coalition for Excellence in Science and Math  
Education  
11617 Snowheights  
Albuquerque, NM 87112-3157  
Return Service Requested

**If you have not paid dues, please help  
with your contribution to defray costs.  
(See page 2 for details.)**

**The CESE annual meeting will be scheduled for the latter part of June, this year. Please plan to attend. Your input and help are needed.**

***Thanks to all that have contributed time and money. We have made a difference and will continue to do so with your ongoing support.***